



Request for City Council Committee Action From the Department of Public Works

Date: May 15, 2012

To: Honorable Sandra Colvin Roy, Chair Transportation & Public Works Committee

Subject: **South Metro Mississippi River Total Suspended Solids (TSS) Total Maximum Daily Load (TMDL)**

Recommendation:

Authorize submission of comments to Minnesota Pollution Control Agency. This process is related to requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit # MN0061018 issued to the City of Minneapolis and the Minneapolis Park & Recreation Board as co-permittees.

Previous Directives:

None

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Approved by:

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Presenters: Lisa Cerney, P.E., Director of Surface Water & Sewers 673-3061

Reviews Not Applicable

Financial Impact

No Financial Impact

Community Impact

Neighborhood Notification: Not Applicable

City Goals: A Safe Place To Call Home -- quality of life; a healthy environment; the city's infrastructure will be well-maintained. Enriched Environment -- plentiful green spaces; lakes, rivers and the soil and air will be clean. A Premier Destination -- the country will see Minneapolis as a national treasure.

Comprehensive Plan: Not Applicable

Zoning Code: Not Applicable

Background/Supporting Information:

The Clean Water Act of 1972 provides a framework for assessing water quality impairments. Called Total Maximum Daily Load (TMDL) Studies, this process calls for monitoring surface water, identifying waterbodies that exceed state standards as being impaired, and then determining the maximum loads of point and non-point sources of pollution that can be allowed without exceeding water quality standards. The South Metro Mississippi River Total Suspended Solids (TSS) Total Maximum Daily Load (TMDL) Study is underway and comments within the public comment period are due to the Minnesota Pollution Control Agency (MPCA) on May 29.

The impaired water that is the subject of this TMDL study is the stretch of the Mississippi River between River Miles 844 and 780, which is the stretch from the confluence of the Mississippi River with the Minnesota River to (but not including) Lake Pepin. The subject impairment is turbidity, or cloudiness of the water. Turbidity is a measure of light refraction that affects photosynthesis in the water column, preventing sunlight from penetrating deeply enough into the water column to support and maintain photosynthetic activity, and therefore preventing a healthy community of submersed (submerged) aquatic vegetation.

This TMDL study is being carried out as a companion to other TMDL studies, most notably for the turbidity impairment of the Minnesota River, and for the nutrient impairment of Lake Pepin, a natural impoundment of the river that is filling in with sediment at an accelerated rate as compared to pre-European settlement. It is important to note that Minneapolis is upstream of the impaired Mississippi River stretch. Where the river leaves Minneapolis, at about River Mile 848, its turbidity level is meeting the state standard by a wide margin. Thus, whereas water clarity of the river is good through Minneapolis and leaving Minneapolis, as stated in the TMDL report “the river becomes suddenly turbid as it absorbs the heavy sediment load of the Minnesota River”, which occurs approximately four miles downstream of Minneapolis.

The report is clear that the Mississippi River is not impaired for turbidity at Minneapolis, and that the major sources of sediment to the impaired stretch of the Mississippi River are the Minnesota River and its tributaries. However, the report targets reductions not only from points downstream of the confluence with the Minnesota River, but above the confluence as well. There are different types of targets that address different pollutant sources. An abbreviated list of sources is non-urbanized areas, urbanized areas, wastewater treatment plants, and the river system itself including its bed, banks and ravines.

Point sources are the only enforceable sources for reductions. These are the sources with NPDES permits, therefore the city’s MS4 discharge is considered a point source although the sources of pollutants in the watershed are nonpoint in nature. For non-point sources, using row-crop agriculture as one example, compliance with the reductions is voluntary and not enforceable. Voluntary practices are underway in non-urbanized areas – according to the TMDL Report there is evidence that conservation practices such as residue management and conservation easements have significantly reduced field erosion – however it is an important distinction that the non-point reductions are not enforceable.

Most units of government in the urbanized area, including Minneapolis, are considered to be point sources because they are required to have MS4 permits to discharge stormwater. TMDL requirements are included in our MS4 permit requirements. For this particular TMDL, the MS4 entities – at least those upstream of the point where the Minnesota River enters the Mississippi River -- are being required to reduce pollutant load to a disproportionately high extent, even though above the Minnesota River the Mississippi River is well within the standard for turbidity. The

comments that the city will submit to the MPCA primarily address whether this reduction requirement will result in a discernible improvement to the impaired water and whether it is justified that the public bear the cost associated with this reduction.

Summary of Comments and Potential Impacts for Minneapolis:

Minneapolis has been a leader for a long time on projects to reduce stormwater runoff pollution to improve quality of receiving water bodies. Minneapolis strives to participate in initiatives that are both beneficial to receiving water bodies and cost effective. This particular study, however, would mandate expenditures for projects that would not noticeably improve the quality of the receiving water body – the stretch of the Mississippi River referred to as “South Metro”. The proposed mandate does not have a sound scientific basis.

At this point in the process it is difficult to quantify in dollars the potential cost for Minneapolis. An extremely rough and conservative estimate is a figure in the tens of millions of dollars over a period of decades. It is also important to bear in mind that other TMDL studies, for other water bodies and other types of impairments, will also obligate the city to carry out additional activities. Most TMDL studies however have a much more direct connection between urban stormwater, the receiving water body impairments, and the goals the TMDL studies are trying to achieve.

As a summary of the city’s proposed comments, the city will ask for elimination of the 25% reduction requirement for Total Suspended Solids by MS4s and the plan should focus on the most cost-effective measures for directly improving the water quality of the impaired water body. The city will ask that if the requirement is not eliminated the reduction level should be reduced and the baseline be adjusted so that all the past projects carried out by the city will count toward compliance.

Attachment1: Map of South Metro Mississippi River

Attachment 2: Map of areas Tributary to South Metro Mississippi River

Attachment 3: List of Comments

Cc: Michael Schmidt, Minneapolis Park & Recreation Board
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Corey Conover, Office of the City Attorney